

(d) the second domain is partially deleted and the first domain is partially deleted, (e) the second domain is partially deleted and the first domain has no deletions, (f) the second domain has no deletions and the first domain is totally deleted, (g) the second domain has no deletions and the first domain is partially deleted, or (h) the second domain has no deletions and the first domain has no deletions.

85. (Amended) The polypeptide according to claim [79] 83, wherein the third domain is partially deleted and (a) the second domain is totally deleted and the first domain is partially deleted, (b) the second domain is totally deleted and the first domain has no deletions, (c) the second domain is partially deleted and the first domain is totally deleted, (d) the second domain is partially deleted and the first domain is partially deleted, (e) the second domain is partially deleted and the first domain has no deletions, (f) the second domain has no deletions and the first domain is totally deleted, (g) the second domain has no deletions and the first domain is partially deleted, or (h) the second domain has no deletions and the first domain has no deletions.

86. (Amended) The polypeptide according to claim [80] 84, wherein the region corresponding to the sequence extending from the amino acid in any one of positions 326-341 to the amino acid in position 442 of SEQ ID NO: 4 is deleted.

87. (Amended) The polypeptide according to claim [79] 83, wherein the first domain is partially deleted.

88. (Amended) The polypeptide according to claim [83] 87, wherein the region corresponding to amino acids 1-266 of SEQ ID NO: 4 is totally or partially deleted.

89. (Amended) The polypeptide according to claim [84] 88, wherein the region corresponding to amino acids 1-45 of SEQ ID NO: 4 is deleted.

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90. (Amended) The polypeptide according to claim [79] 83, wherein the polypeptide has at least 70% homology with SEQ ID NO: 4.
91. (Amended) The polypeptide according to claim [79] 83, wherein the polypeptide has at least 80% homology with SEQ ID NO: 4.
92. (Amended) The polypeptide according to claim [79] 83, wherein the polypeptide has at least 90% homology with SEQ ID NO: 4.
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- G<sup>2</sup>
94. (Amended) The polypeptide according to claim [89] 93, wherein the third domain is totally deleted and (a) the second domain is totally deleted and the first domain is partially deleted, (b) the second domain is totally deleted and the first domain has no deletions, (c) the second domain is partially deleted and the first domain is totally deleted, (d) the second domain is partially deleted and the first domain is partially deleted, (e) the second domain is partially deleted and the first domain has no deletions, (f) the second domain has no deletions and the first domain is totally deleted, (g) the second domain has no deletions and the first domain is partially deleted, (h) the second domain has no deletions and the first domain has no deletions.
95. (Amended) The polypeptide according to claim [89] 93, wherein the third domain is partially deleted and (a) the second domain is totally deleted and the first domain is partially deleted, (b) the second domain is totally deleted and the first domain has no deletions, (c) the second domain is partially deleted and the first domain is totally deleted, (d) the second domain is partially deleted and the first domain is partially deleted, (e) the second domain is partially deleted and the first domain has no deletions, (f) the second domain has no deletions and the first domain is totally deleted, (g) the second domain has

no deletions and the first domain is partially deleted, or (h) the second domain has no deletions and the first domain has no deletions.

96. (Amended) The polypeptide according to claim [90] 94, wherein the region corresponding to the sequence extending from the amino acid in any one of positions 346-361 to the amino acid in position 543 of SEQ ID NO: 2 is deleted.

97. (Amended) The polypeptide according to claim [89] 93, wherein the first domain is partially deleted.

98. (Amended) The polypeptide according to claim [93] 97, wherein the region corresponding to amino acids 1-281 of SEQ ID NO: 2 is totally or partially deleted.

99. (Amended) The polypeptide according to claim [94] 98, wherein the region corresponding to amino acids 1-40 of SEQ ID NO: 2 is deleted.

100. (Amended) The polypeptide of claim [89] 93, wherein the third domain has no deletions, the second domain is partially deleted and the first domain (a) has no deletions or (b) is partially deleted.

101. (Amended) The polypeptide according to claim [96] 100, wherein the region corresponding to amino acids 1-40 of SEQ ID NO: 2 is partially or totally deleted.

102. (Amended) The polypeptide according to claim [89] 93, wherein one or more of the regions corresponding to amino acids 362-379, 418-444, 465-481, and 500-520 of SEQ ID NO: 2 is partially or totally deleted.

103. (Amended) The polypeptide according to claim [98] 102, wherein (a) the first domain has no deletions and the third domain has no deletions, (b) the first domain has no deletions and the third domain is partially deleted, (c) the first domain has no deletions and the third domain is totally deleted, (d) the first domain is partially deleted and the

third domain has no deletions, (e) the first domain is partially deleted and the third domain is partially deleted, (f) the first domain is partially deleted and the third domain is totally deleted, (g) the first domain is totally deleted and the third domain has no deletions, (h) the first domain is totally deleted and the third domain is partially deleted, or (i) the first domain is totally deleted and the third domain is totally deleted.

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104. (Amended) The polypeptide according to claim [89] 93, wherein the polypeptide has at least 70% homology with SEQ ID NO: 2.
105. (Amended) The polypeptide according to claim [89] 93, wherein the polypeptide has at least 80% homology with SEQ ID NO: 2.
106. (Amended) The polypeptide according to claim [89] 93, wherein the polypeptide has at least 90% homology with SEQ ID NO: 2.
107. (Amended) A polypeptide [comprising] consisting of amino acids 1-345 of SEQ ID NO: 2, wherein the polypeptide induces the production of neutralizing antibodies that recognize one or more strains of *N. meningitidis*.
108. (Amended) A polypeptide having from 70% to 100% homology with the polypeptide of claim [103] 107.
109. (Amended) The polypeptide according to claim [104] 108, wherein the polypeptide comprises amino acids 1-351 of SEQ ID NO: 6.
110. (Amended) The polypeptide according to claim [104] 108, wherein the polypeptide comprises amino acids 1-354 of SEQ ID NO: 8.
111. (Amended) The polypeptide according to claim [104] 108, wherein the polypeptide comprises amino acids 1-358 of SEQ ID NO: 10.

112. (Amended) The polypeptide according to claim [104] 108, wherein the polypeptide comprises amino acids 1-322 of the polypeptide encoded by SEQ ID NO: 36.
113. (Amended) The polypeptide according to claim [104] 108, wherein the polypeptide comprises amino acids 1-346 of the polypeptide encoded by SEQ ID NO: 38.
- 6<sup>12</sup> 114. (Amended) A polypeptide [comprising] consisting of amino acids 1-325 of SEQ ID NO: 4, wherein the polypeptide induces the production of neutralizing antibodies that recognize one or more strains of *N. meningitidis*.
115. (Amended) A polypeptide [comprising] consisting of amino acids 1-442 of SEQ ID NO: 4, wherein the polypeptide induces the production of neutralizing antibodies that recognize one or more strains of *N. meningitidis*.
116. (Amended) A polypeptide having from 70% to 100% homology with the polypeptide of claim [110] 114.
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118. (Amended) The polypeptide according to claim [113] 117, wherein amino acids 544-691 are deleted.
119. (Amended) A polypeptide having from 70% to 100% homology with the polypeptide of claim [113] 117.
- 6<sup>3</sup> 120. (Amended) The polypeptide according to claim [115] 119, wherein the polypeptide is obtained by deleting amino acids 365-382, 421-453, 474-495 and 514-534 of SEQ ID NO: 6.
121. (Amended) The polypeptide according to claim [115] 119, wherein the polypeptide is obtained by deleting amino acids 366-383, 422-448, 469-485 and 504-524 of SEQ ID NO: 8.

122. (Amended) The polypeptide according to claim [115] 119, wherein the polypeptide is obtained by deleting amino acids 372-389, 428-454, 475-491 and 510-529 of SEQ ID NO: 10.
123. (Amended) The polypeptide according to claim [115] 119, wherein the polypeptide is obtained by deleting amino acids 339-356, 395-421, 443-458 and 477-497 of the polypeptide encoded by SEQ ID NO: 36.
124. (Amended) The polypeptide according to claim [115] 119, wherein the polypeptide is obtained by deleting amino acids 363-380, 429-445, 467-482 and 501-521 of the polypeptide encoded by SEQ ID NO: 38.
125. (Amended) A polypeptide [comprising] consisting of amino acids 346-543 of SEQ ID NO: 2, wherein the polypeptide induces the production of neutralizing antibodies that recognize one or more strains of *N. meningitidis*.
126. (Amended) A polypeptide having from 70% to 100% homology with the polypeptide of claim [121] 125.
127. (Amended) The polypeptide according to claim [122] 126, wherein the polypeptide comprises amino acids 347-557 of SEQ ID NO: 6.
128. (Amended) The polypeptide according to claim [122] 126, wherein the polypeptide comprises amino acids 350-557 of SEQ ID NO: 8.
129. (Amended) The polypeptide according to claim [122] 126, wherein the polypeptide comprises amino acids 354-551 of SEQ ID NO: 10.
130. (Amended) The polypeptide according to claim [122] 126, wherein the polypeptide comprises amino acids 323-521 of the polypeptide encoded by SEQ ID NO: 36.

131. (Amended) The polypeptide according to claim [122] 126, wherein the polypeptide comprises amino acids 345-544 of the polypeptide encoded by SEQ ID NO: 38.

#### REMARKS

The Applicants acknowledge the renumbering of the claims. The numbering of the claims presented in the amendments herein complies with the renumbering stated in the Office Action. The present amendments correct the dependency of the claims in view of the claim renumbering.

Claims 77 and 78 have been canceled without prejudice, thereby rendering the § 112 rejections moot.

#### Rejection of claims 83-133 under 35 U.S.C. § 102

The Office Action maintained the rejection of the claims as anticipated by Legrain *et al.* (AS) and Quentin-Millet *et al.* for the reasons of record. The applicants respectfully traverse.

Legrain *et al.* and Quentin-Millet *et al.* each teach the **full length** Tbp2 protein. The present claims, however, exclude the full length protein from their scope.

For example, part (b) of independent claims 83 and 93 states, "the [claimed] polypeptide is derived from the Tbp2 subunit by total or partial deletion of at least one domain." Thus, claims 83, 93, and all those that depend therefrom encompass polypeptides having fewer amino acids than the full length proteins of Legrain *et al.* and Quentin-Millet *et al.*

Independent claims 107, 114, 115, and 125 each recite polypeptides consisting of an amino acid sequence less than the full length Tbp2 proteins of the prior art, thereby excluding the prior art from their scope and the scope of the claims dependent therefrom.